

Appl. No.: 10/541,085  
Reply to Office Action of: 02/25/2009

REMARKS

Claim 8 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 21-23 rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 8 and 21-23 have been cancelled without prejudice to address the examiners concerns.

Claims 1, 3, 5-10, 15, 16, and 19-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki et al. (US 2002/0034930) in view of Lueders (US 6,067,074). Claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki et al. (US 2002/0034930) in view of Lueders (US 6,067,074) and Gutowitz (US 6,219,731). Claims 14, 17, and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki et al. (US 2002/0034930) in view of Lueders (US 6,067,074) and Ostergard et al. (US 6,704,004). The examiner is requested to reconsider these rejections.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Claim 1 recites, *inter alia*, "a set of switches ... a set of mechanical key elements ... wherein each mechanical key element comprises a separate outer pad for actuation by a user ... and a continuous flexible display film, extending beneath the set of mechanical key elements and over the set of switches ... and configured to position the set of mechanical key elements for user actuation and ... arranged to flex when a user moves any one of the set of mechanical key elements to operate a

Appl. No.: 10/541,085  
Reply to Office Action of: 02/25/2009

respective switch and ... to have a first display output in which a first set of indicia are displayed ... and a second display output in which a second set of indicia ... are displayed ..." .

Embodiments of the invention are directed to a fixed array of travelling key elements with separate outer pads, a set of switches and a continuous flexible display film which extends under all the key elements and over the switches. The display film supports the key elements. The key elements comprise a separate outer pad and are capable of being moved by a user. Such movement causes the key element to bear against the display film, causing the display to flex. This results in the actuation of a switch.

In contrast, Yamazaki merely discloses a keypad comprising a number of transparent buttons each located above a separate non-flexible electro-luminescent (EL) display device. The EL display devices are located on the top surface of a structure comprising electrical wiring, a flexible printed substrate layer and a flexible sheet. The buttons protrude through a housing. Each EL display device is individually programmable.

Lueders discloses a touch pad device in which a flexible display overlies a printed circuit board comprising a plurality of switches. In order to actuate a switch the user makes direct contact with the display. As a result of this the display flexes to actuate a switch concealed beneath the display.

The examiner alleges that it would be obvious to substitute the display of Lueders into Yamazaki. This would involve two

Appl. No.: 10/541,085  
Reply to Office Action of: 02/25/2009

stages: a) removing the display of Yamazaki and b) replacing it with the display of Lueders.

a) Removing the display of Yamazaki:

Removing the display of Yamazaki would corrupt the teaching of Yamazaki. The purpose of Yamazaki is to provide an electronic device with transparent buttons and individually programmable displays located beneath the buttons. Removal of the displays would teach against this purpose. The skilled person would not be motivated to adapt Yamazaki in this way.

b) Replacing the display of Yamazaki with that of Lueders:

Replacing the display of Yamazaki with that of Lueders would further corrupt the teaching of Yamazaki. It would involve removing not only the display of Yamazaki but also the buttons, housing, electrical wiring etc. The function of each of those components in Yamazaki is performed by the display of Lueders. There would therefore be no need to retain those components in the resulting device. After incorporation, the resulting device would effectively be the device of Lueders. This contradicts the teaching of Yamazaki. The skilled person would not be motivated to adapt Yamazaki in this way.

Yamazaki teaches the use of a fixed arrangement of keys each of which has an associated display. This enables the function of a key, when it changes, to be indicated in the display associated with the key. Yamazaki therefore teaches a fixed arrangement of keys but flexibility in the identification of the functions of the keys.

Appl. No.: 10/541,085  
Reply to Office Action of: 02/25/2009

Applicants submit that there is no suggestion to combine the references as the examiner is attempting to do (at least not until after reading applicants' patent application). In particular, Lueders teaches a touch screen that has a flexible arrangement of touch sensitive buttons displayed on the screen. Lueders therefore teaches away from having a fixed arrangement of keys as in Yamazaki and towards having a completely flexible touch screen arrangement.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. (see MPEP 2143.01, page 2100-98, column 1). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination (see MPEP 2143.01, page 2100-98, column 2). A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. (see MPEP 2143.01, page 2100-99, column 1) Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). >See also Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308, 50 USPQ2d 1161

Appl. No.: 10/541,085  
Reply to Office Action of: 02/25/2009

(Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references.)

The skilled person starting from Yamazaki would not seek to incorporate the teaching of Lueders as it is incompatible with the teaching of Yamazaki. This is because whereas Yamazaki teaches the use of a fixed arrangement of keys, Lueders teaches the use of a touch screen to provide a flexible arrangement of keys. Therefore Yamazaki and Lueders represent independent solutions that would not be mixed.

In the present case, there is no teaching, suggestion, or motivation, found in either the references themselves or in the knowledge generally available to one of ordinary skill in the art, to provide the elements as claimed in claim 1. The features of claim 1 are not disclosed or suggested in the art of record. Therefore, claim 1 is patentable and should be allowed.

Though dependent claims 3, 5-11, 14, 15, 19 and 20 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 1. However, to expedite prosecution at this time, no further comment will be made.

Claim 16 claims, *inter alia*, "a plurality of mechanical key elements ... wherein each of the plurality of mechanical key elements comprises an outer pad ... a plurality of switches ... wherein the display device comprises a light emissive layer extending underneath the plurality of mechanical key elements and over the plurality of switches ... wherein a display pattern of the display device can be ... arranged so as to be capable of

Appl. No.: 10/541,085  
Reply to Office Action of: 02/25/2009

propagating two or more patterns of light from at least some of the key elements ... whereby indicia may be displayed from the key elements and the displayed indicia varied under the control of the display controller".

Similar to the arguments above with respect to claim 1, Lueders teaches a touch screen that has a flexible arrangement of touch sensitive buttons displayed on the screen. Lueders therefore teaches away from having a fixed arrangement of keys as in Yamazaki and towards having a completely flexible touch screen arrangement. Additionally, applicants submit that there is no suggestion to combine the references as the examiner is attempting to do (at least not until after reading applicants' patent application). In the present case, there is no teaching, suggestion, or motivation, found in either the references themselves or in the knowledge generally available to one of ordinary skill in the art, to provide the elements as claimed in claim 16. The features of claim 16 are not disclosed or suggested in the art of record. Therefore, claim 16 is patentable and should be allowed.

Though dependent claims 17 and 18 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 16. However, to expedite prosecution at this time, no further comment will be made.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record. Accordingly, favorable reconsideration and allowance is

Appl. No.: 10/541,085  
Reply to Office Action of: 02/25/2009

respectfully requested. If there are any additional charges with respect to this Amendment or otherwise, please charge deposit account 50-1924 for any fee deficiency. Should any unresolved issue remain, the examiner is invited to call applicants' attorney at the telephone number indicated below.

Respectfully submitted,



Juan Juan (Reg. No. 60,564)

4/27/2009

Date

Customer No.: 29683  
Harrington & Smith, PC  
4 Research Drive  
Shelton, CT 06484-6212  
203-925-9400

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

April 27, 2009  
Date

J. Monick  
Name of Person Making Deposit